PAARAgraphs

Celebrating 65 years as an *active* ham radio club—*Since 1937*
Newsletter for the **Palo Alto Amateur Radio Association, Inc.**

CALENDAR

December...6, **PAARA Meeting**, 7:30
Menlo Park Recreation Center
700 Alma Street, Menlo Park
December..11, **PAARA Board Meeting**, 7:30
Red Cross Bld., 400 Mitchell Ln., Palo Alto
January.......3, **PAARA Meeting**, 7:30
January.......8, **PAARA Board Meeting**, 7:30
January.....17, **PAARA –FARS WINTER PARTY**
(see page 110)

February.....7, **PAARA Meeting**, 7:30
February...12, **PAARA Board Meeting** 7:30
The ARRL has a code practice:
URL http://www.pcpractice.com/CW/
-Don KF6JMQ

PROGRAM

December 6, 2002 7:30 P.M

Election Night
&
"Show and Tell"

Join us for pre-meeting eyeball
at Su Hong Restaurant , 1039 El Camino Real, Menlo Park
Food will be served at **6:00** sharp, so guests will be on time for the PAARA
meeting. Those arriving late will be responsible for their own order and bill.

—PAARA Radio NET every Monday evening at 8:30 P.M.,local time—
on the 145.230 -600 MHz repeater, PL tone off

PAARA ELECTION
OF
OFFICERS and BOARD MEMBERS
December 6th

Four Officers and two Board Members are to be elected. Volunteers or nominations may be made from the floor at the next general meeting.

The following have volunteered:

Officers:*(elected each year)*
Andreas Junge, N6NU, President
Jim Rice, K6AK, VP & Program Chair
Jay Melvin, WA6SBO, Secretary
Bob Korte, KD6KYT, Treasurer

Board Members:*(elected to serve 2 year terms. Two to be elected this year)*

Adrianus Schrauwen, W6AJS Board Member *(Adrianus is completing Joel's term and is willing to serve a full term through 2004)*

Comtinuing Board Members (terms run through 2003).
Gerry Tucker N6NV,
Rolf Klibo N6NFI,
Jim Rice K6AK

Note that Jim's assumption of the VP will leave a seat on the Board of Directors unoccupied. This would leave room for two Board member replacements with terms running through 2004. There is no "past president" to serve on the Board*.

Excerpt from **PAARA BY-LAWS**
Article II, Second sentence, shall read:
Five members of the Board of Directors shall constitute a quorum for the transaction of business.
Article III, shall read:
The Board of Directors shall consist of the officers, four directors and the immediate past president*.
Approved at the regular meeting January 8, 1999
Published: PAARA*graphs* February 1999

Miscellaneous Dates

ELECTRONIC FLEA MARKET @ Foothill College
Perham Foundation Sponsorship 408/734-4453, 408/736-2685 fax
Second Saturday of month, March -October, 6 AM-2PM

PAARA Palo Alto Amateur Radio Association
meets 1st Friday 7:30 each month, Net 145.230 each Monday 8:30.
contact: Andreas Junge N6NU..............(650) 233 0843

FARS Foothills Amateur Radio Society
meets 4th Friday 7:30 each month.
contact: Sheldon Edelman N6RD, 650 493 7212, *n6rd@earthlink.net*

NCDXC Northern California DX Club
meets 2nd Friday 7:30 each month, repeater for member info 147.360, Thur 8:00PM,
contact: Bob Mammarella KB6FEC 408 729 1544.

NorCalQRP Northern California QRP Club
meets 1st Sunday each month,
contact: Jim Cates 3241 Eastwood Rd., Sacramento, CA 95821.

Perham Foundation.
contact: (408) 734 4453.

SPECS Southern Peninsula Emergency Communication System
meets each Monday 8:00PM on Net 145.27, 440.80 MHz www.specsnet.org
contact: Tom Cascone, KF6LWZ, 650-688-0441 *specs@svpal.org*

SCARES South County Amateur Radio Emergency Service
meets 3rd Thursday 7:30 each month, San Carlos City Hall.
Net is on 146.445 [PL 114.8] & 444.50 (PL100) 7:30 Monday evenings.
contact:

SCCARA Santa ClaraCounty Amateur Radio Association
Operates W6UU repeater 146.385+ Nets: 2m, W6UU, 7:30 Mon: 10m,
28.385, 8:00 Thur. meets 2nd Mon each month.
contact: Barbara Britten, KD6QEI at 293-3847

SVECS Silicon Valley Emergency Communications
Operates WB6ADZ repeater (146.115 MHz+)
contact: Lou Stierer WA6QYS 408 241 7999

WVARA West Valley Amateur Radio Association
operates W6PIY repeater 147.39+, 223.96, 441.875, 1286.2
meets 3rd Wed every month.
contact: Glen Lokke Jr. KE6NBO at 408 971 8626, or *glokke@pacbell.net*

Disaster Services.
PALO ALTO CHAPTER, American Red Cross, *www.paarc.org*
400 Mitchell Lane
Meets 3rd Wed. each month 7:30PM,
HF, packet, BBS, ATV, OSCAR Gateway, NASA satellite.
contact: Mac Millian 650-688-0423 *MACM@paarc.org*

SAN JOSE CHAPTER, American Red Cross
contact: Scott Hensley KB6UOO, (408) 967 7924, *FSHENSLEY@NOVELL.COM*

VE Exams, 3rd Saturday each month, 10:30AM, 145.23 - PL=100Hz
Redwood City Main Library..Community Conference Room
1044 Middlefield Road, Redwood City, CA
contact: Al WB6IMX@att.net.

Swap meet, LosPositas College, Livermore, 1st Sunday each month.
Contact: Cliff Kibbe (209) 835 6715 or Eliot Ross (925) 606 7710

(please send changes to PAARAgraphs editor: k6uro@arrl.net)

Palo Alto Amateur Radio Association, Inc.
PO Box 911
Menlo Park, CA 94026

President	Vacant
Vice President	Andreas Junge N6NU..............(650) 233 0843
	n6nu@arrl.net
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	wa6sbo@arrl.net
Treasurer	Bob Korte, KD6KYT..................(650) 595 1842
	RGK4U@aol.com

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ab6so@smrn.com
Membership..........Lisa Rice, KG6KQS................(650) 851 -2274
lisarice@earthlink.net
W6OTX Station Trustee..Gerry Tucker, N6NV..........(650) 326 4908
K6YQT Station Trustee..Gerry Tucker, N6NV..........(650) 326 4908
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ARES Officer.........Lily Anne Hillis, N6PGM ....(650) 325 5484
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Webmaster ....Curt Kolovson, AE6EJ...............
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Board of Directors

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tucker.gerry@ssd.loral.com
Rolf Klibo, N6NFI   (650) 856 -2748   '03
klibo@earthlink.net
Jim Rice, K6AK   '03
k6ak@arrl.net
Adrianus Schrauwen, W6AJS (completing Joel's term)'03
hagenees@att.net
(Joel Wilhite, KA7TXV   resigned 5 8 02   '03)

(see "Calendar" for Board meeting times, **visitors welcome**)

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PAARA*graphs* e-mail address: k6uro@arrl.net
Submit material for PAARA*graphs* by the 15th
Use WORD, rich text, ascii, .pub, .ps, or .jpg.
PAARA Website: www.paara.org

Instructions on how to subscribe to PAARA mailing list

Here are the steps in the long form:
1) go to http://mailman.qth.net/
2) click on: "To Subscribe to Lists Click Here! "
3) Find PAARA on list and click on it
4) enter your email address and pick a password
5) hit the "Subscribe" button
The short form of the instructions are:
1) go to http://mailman.qth.net/ and follow the instructions.
Andreas, N6NU

NEW PAARA WEB

Thanks to **Andreas Junge, N6NU**
and
Curt Kolovson, AE6EJ, Webmaster

PAARA has a new web site. Check it out.

www.paara.org

Soap Box Observations

'02 Pacificon

by Jay Melvin, WA6SBO

Highlights of my experience at Pacificon in Walnut Creek started out with a legal theme, went on to Emergency Preparedness and then assorted hamliness. There were more vendors than ever while the event was inside the hotel proper (not the hanger) except for the flea market in the parking lot and loitering pedestrian portables on the front lawn.

Friday breakfast was with Chris Imlay, W3KD and Phil Kane, K2ASP followed by the Legal Forum.

Emergency Preparedness Forum with discussions of the ARRL Education program and funding following 9/11. Dan Miller, K3UFG, EC presented.

AMSAT booth's display of antennas, especially the K5GNA barbeque rack styled dish with 13 CM to 2 M converter ($175) for receiving AO-40's main downlink. W6FOG had with him his Umbrella Cockatiel one day and a parrot the next to decorate the array of beams by an Az-El mount.

Saturday Breakfast at the table w/ President Jim Haynie, W5JBP along w/ PAARA member Don Trask, KF6JMQ before the President's opening welcome speech.

Flea Market where a Collins '380 was offered (over my budget). I bought a 70 CM antenna tuner w/ SWR meter. Bumped elbows with more PAARA scroungers than I remember seeing at other conventions. Very friendly.

All day Saturday and Sunday elbow bumping with PAARAnoids and other friends around the vendor booths; show prices make waiting for Pacificon worthwhile.

Keynote speaker Chris Imlay, W3KD, ARRL General Counsel, was strongly interfered with by another group's music. Subsequently, the Pacificon management graciously refunded ticket holders with funds relayed from the hotel. The QRN was overcome by experienced operators but was disconcerting.

Sunday's booths led to more elbow bumping with friends. The closing Forum, with a speech by W5JPB and question and answer period was very dynamic. Prizes by lottery.

What (I know) I missed was the Antenna Forum and the QRP sessions. I whole heartedly encourage everyone to come to the next Pacificon and share the fun, comradery and education. SK

NEW MEMBER

David K. Rogers K5DKR
P.O. Box 10
Redwood City, CA 94064-0010
(650) 361-1555)

FLEA MARKET

My Thanks

for the people that assisted me at the entrance:

Jay, Rolph,

and at the 4 sale area:

Gerry, Rich (Gerrys bro) & Andy

Flea Market Results.

Gross Sales.

Food	$1064.00
Space Rent	$2625.00
4 Sale Items	$503.00

Paid out expense

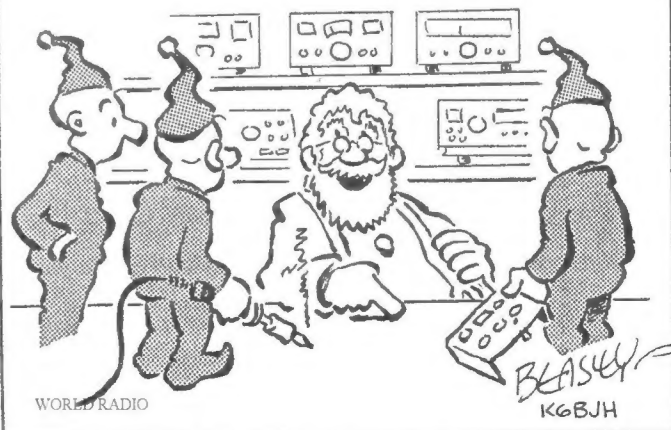|	
Rent foothill space	$875.00
Food (est)	$445.00

Gross Income $2,872.00

Bob Korte, KD6KYT Treasurer

RGK Technical Sales
408 396-4745
visit www.rgktechsales.com

SANTA'S WORKSHOP
AMATEUR ELECTRONICS DIVISION

WORLD RADIO

K6BJH

FELLAS, YOU'VE BEEN DOING A GREAT JOB PUTTING THESE RADIOS TOGETHER, BUT I THINK IT'S TIME WE CONSIDERED IMPORTING THEM

Introduction to APRS

For those not familiar with the Automatic Position Reporting System (APRS), the most important thing to understand is that APRS is not just a communications tool like Packet or RTTY, but rather a whole set of tools - a toolbox if you will - all designed to work together. All of these tools designed to facilitate the management of any team effort across a wide area.

What's inside APRS

Let's take a peek inside this toolbox and see what we find:

Geographic Information Systems: APRS provides for the display of data on a wide variety of maps. Virtually any map which may be displayed on a computer may have APRS data displayed over it. The display may be in two dimensions (position on the earth's surface) or three dimensions (including altitude). Some of the items typically displayed on a map include: storms, weather observations (e.g. temperature, wind speed, etc) airplanes, moving vehicles, runners, bicycles, shelters, ham stations, homes, businesses, fires, accidents, etc.

APRS Software: This is the tool which ties all of the parts together and sorts incoming data into meaningful tables. The APRS software may be run on virtually any computer which supports one of the following operating systems: MS DOS (ver 2.0 and higher), MS Windows (ver 3.0 and higher), MS Windows CE, Macintosh, LINUX, and Java. APRS programs have also been written for a variety of postage-stamp processors, and at least two Kenwood and one Alinco receivers. This software provides for the handling of all of the following types of data: position reports, status reports, objects, weather reports, storm data, shelter data, telemetry, messages traffic, bulletins, warnings, and beacons.

Global Positioning Satellite (GPS) Systems: The Global Positioning Satellite System allows users to pinpoint their exact location on the surface of the earth (or above it). Typically, a small antenna, about the size of a computer mouse can provide digital data containing the latitude, longitude (and sometimes altitude) of the device. When this data is input to the APRS system, all users can see the exact location of that device on a map as it moves. For example, a mobile ham unit (car) using APRS could have its location constantly reported to an EOC (Emergency Operations Center). APRS can also work with LORAN systems used in the maritime environment.

UI Radio Packets Packet Radio is a system invented by hams to transmit digital data over radio circuits designed for voice. Data to be transmitted is split into small units called *packets* and then converted to audio tones (often via FSK) and transmitted as an audio signal. On the receiving end, the tones are converted back to digital data and assem-

bled into the original stream of data. *UI* refers to Unnumbered Information, which is a specific type of packet which does not require acknowledgement (the data equivalent of a voice broadcast). Radio frequencies most commonly used by APRS include 144.39 Mhz, 7.085, 10.151, and 18.107 Mhz LSB. However, APRS packets may be transmitted over almost any voice channel, including over police radios, amateur repeater systems, business band, marine band, Citizen's Band, cell phones and even landlines.

APRS Digipeater Network In the 2-meter band, APRS stations may have as little as 1 watt of power and yet have their packets reach stations as far as 400 miles away. This is accomplished by a network of dedicated digital repeaters (*digipeaters*) which relay signals over long distances. To avoid network saturation, packets are normally repeated only three times, hence the 400 mile limit.

Trak-Net For mobile users in remote areas not served by digipeaters, packets may be repeated via orbiting satellites. The mobile station requires a 10 watt output and a 5/8-wave antenna to uplink a signal on 144.90 Mhz.

APRS-NET In addition to staying in touch by radio, APRS can take advantage of the Internet to transmit data to stations out of radio range, or to stations not equipped with radio capabilities. By design, APRS data is only transmitted about 400 miles by radio. However, the Internet allows users all over the world to exchange data when desirable. Virtually any computer with APRS software and a modem may receive data from the APRS-Net. (ISP not required!)

ZIP-LAN For computers not already connected to a network, a very inexpensive serial data network may set up to provide all users access to APRS data. This would be helpful in a police headquarters or EOC where there may be computers that normally work independently, but all need access to APRS information during an emergency.

Weather Stations Inexpensive weather monitoring equipment may be connected to an APRS station to provide a continuous stream of weather observations from the station's location. Parameters such as temperature, wind speed (gust and sustained) and direction, barometric pressure, rainfall and relative humidity are often available on a real-time basis from locations all around a major city. This data can be of enormous value to weather forecasters, race organizers, and hazardous-materials- incident teams.

Aircraft Communications and Reporting System - ACARS - Commercial aircraft use this packet system to stay in touch in the 129 - 131 Mhz band. If your TNC is programmed to recognize these packets, they may also be reported by APRS, giving you position information on all participating aircraft within 200 miles of your location.

If all of this sounds a bit overwhelming to you, remember that our telephone system in the US is pretty complicated, too, with central offices, satellite links, switching centers, microwave circuits, cell sites and much more. BUT it does not take a rocket scientist to make phone call! Just as a six - year old can effectively use a telephone, a teenager could

easily send and receive messages over APRS.

As you can see, there's a whole lot to APRS - more than you could learn in one sitting. The fundamental concept behind APRS is the old saying, "A picture is worth a thousand words." The same concept applies to learning APRS: you could do an awful lot of reading about APRS and still not have a good idea of how it works. Probably the best way to learn APRS is to obtain a shareware copy of APRS software for your computer, load it, and experiment with it. Note that you don't need any radio or packet equipment to get started. If you can connect to the Internet, you can see the whole world on APRS!

Thanks to QRZ

How to Become a Ham

Ham radio is *the* premier high-tech hobby. It's enjoyed by people from all walks of life from around the world. The rules for becoming an amateur (ham) radio operator vary from country to country around the world. On this page we're going to tell you a little about the hobby and how you can obtain the necessary license to operate in the United States.

It's never been so easy to get into ham radio. All ham radio operators must be *licensed* before they can legally operate. This differs a great deal from the CB (i.e. truckers) and FRS (i.e. dimestore walkie-talkie) services which require no licenses.

Amateur radio operators must be licensed because they are given transmitting privileges on a wide variety of frequencies and are allow to use just about any equipment imaginable, even home built radios. Amateurs are allotted not single specific frequencies but usually whole ranges (bands) of different frequencies to operate on. These frequencies and methods of transmission are are specified by FCC rules and so it is therefore necessary to be generally familiar with your operating limitations in order to transmit lawfully.

In order to qualify for an amateur radio license, you must pass certain tests to determine that you have the required knowledge. Fortunately, the tests are not terribly difficult for most people. There are three license levels (known as classes) where each class grants greater privleges to the individual. There is a single written test for each license class, and for the advanced classes, a simple 5 word-per-minute Morse code test. The license classes are:

· **Technician** Class - this is the entry level license. It gives privileges on all amateur frequencies above 50 Mhz and is the most popular. It requires only a written test.

· **General Class -** this is the mid-level license. It enables privileges on most amateur frequencies below 50 Mhz and includes global HF (shortwave) communications. This license also has a written test and a 5 word-per-minute Morse code test.

· **Extra Class** - this is the highest level license. It grants privileges on all amateur frequencies. It has its own written test and requires that you also have passed all of the Technician and General class written and Morse code tests.

Okay, so where do I start?

This part is easy. The first thing you should do is obtain the home study materials to prepare you for the test. These will give you the background that you'll need to understand the gist of what the tests are about. You can even order study materials online!

When you're ready to take the test, you should then locate the nearest license exam opportunity in your area. The ARRL website provides a **searchable index** where you can find the test session nearest you.

The W5YI-VEC also offers many testing opportunities. You can visit their website at: **http://www.w5yi .org/vol-exam.htm**

That's it! It typically takes about 2 weeks for your new license to arrive in the mail and you're ready to go! In the meantime, you can look into local clubs and ham radio organizations to find out more about what's going on in your area.

License Study Materials

QRZ, in association with the W5YI-VEC, have made a comprehensive set of license exam study materials available.

More information and links at www.QRZ.com

COOKIES
QRZ Website Information Policy

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If you have any questions about our policy, please contact QRZ **webmaster**.

Thanks and 73,
The QRZ Staff

PAARA-FARS
Winter Banquet

The date of the banquet is
January 17, 2003.

The charges for the three entrees will be:
(B)Roast Prime Rib of Beef. au jus $31.50;
(S)Broiled Salmon, Lemon Beurre Blanc $28.50;
(C)Breast of Chicken, Florentine. $26.50.

All the costs worked out to be over an even dollar and rather than go up a full dollar, it was decided to round up all prices to $ .50 for simplicity in calculations. Incidentally there is a vegetarian dish(V) available for $21.00.

We will have Cheese Cake for dessert the same as last year.

Each entree is served with seasonal greens, "intermezzo" pasta, fresh vegetables, potato du jour, french rolls and coffee. This is the same as last year.

Door prizes will be available to Hams, i.e. only Hams will get tickets for the drawing.

If more information is needed, please contact **Mark Hardy, KG6GRR** by email mhardyca@attbi.com or phone at 408-243-0701 or you can contact Dick Baldwinson N6ATD@arrl.net.

The signup sheet follows:

Dear YLISSB Member:

I am emailing you and hundreds of other members to make sure you are aware that the year 2003 will commemorate 40 years of the YL System being in existence. The System's "Big Birthday" is on February 9 and many events are planned for the entire year of 2003, including some new awards.

Many changes have taken place since 1963 and a lot of new hams have joined in as we now approach 16.000 members. In case you are not aware, our Foundress V. Mayree Tallman, K4ICA became a silent key on June 19, 2001 and it is a great tribute to her that Our System, Your System continues on.

We'd love to hear you on 14.332 with us and remember, your ISSB number is good for life. If you would like to pay your dues in order to receive the VOICE and get up to date with things, simply send $10 in US currency to Flo KU7F. ($15 for DX members)

We know callsigns change and sometimes are reissued, so if this email has been sent to you and you are not a member, please forgive the intrusion but you are still welcome to join us on 14.332. Information about our System is available on our website: http://www.qsl.net/yl-issb or just check in with us and make a host of new friends. We are active from 1300Z until around 0100Z.

I am looking forward to working you.
Sincerely,

Mona S. Doucet
VE9MSD
ISSB #15632
Advisory Committee Member

Winter Banquet 2003 Signup

Please fill in all names so we can avoid listing them as "Unnamed Person, Beef."

Name and Call	Meal Choices (B, S, C, V)	Amount
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
Total		_____

MENLO PARK

PAARA meeting

1st Friday 7:30

El Camino Real

700 Alma St

PAARA Radio NET
every Monday evening
8:30 P.M.,local time
on the
145.230 -600 MHz repeater

PL tone off

control operators
1st Mon KG6ILA, Pinkney Foster
2nd Mon N6NU, Andreas Junge
3rd Mon AD6FX, Jon Zweig
4th Mon AA6PA, Bill Rausch
5th Mon   tba

PAARAgraphs December 2002

Palo Alto Amateur Radio Association, Inc.
PAARAgraphs Newsletter
P.O. Box 911
Menlo Park, California 94026

FIRST CLASS MAIL

WINTER BANQUET

ELECTIONfor 2003

Webb site for propagation information:
www.arrl.org/w1aw/prop/

94062+3919 27